



August 4, 2020

Mr. William J. Oldenburg, PE
Assistant Director of Project Development
Chairperson, Consultant Selection Committee
New Hampshire Department of Transportation

RE: Letter of Interest
Statewide On-Call Preliminary Engineering Prequalified List of Consultants for locally administered Local Public Agency (LPA) Qualifications-Based Selection Contracts

Dear Mr. Oldenburg,

Finding and hiring a qualified, experienced, and knowledgeable consultant to properly manage, permit, design, and oversee construction of a municipality's transportation asset can be a daunting challenge. As such, we applaud the Department's desire to prequalify consultants to provide municipalities throughout New Hampshire a list of firms from which to solicit professional engineering services. Such a resource ensures municipalities are selecting a consult that understands the complex process and requirements of roadway and bridge projects. With our long and successful history providing roadway and bridge engineering services to our municipal clients throughout New Hampshire and New England, we look forward to being prequalified by the Department.

Experience

BETA has been providing roadway and bridge planning, permitting, design, and construction oversight services to our municipal clients for 38 years. Many of these projects are funded by state grants requiring oversight and review by the funding agency. BETA is pre-qualified by MassDOT, RI Department of Administration, MA Division of Capital Asset Management & Maintenance, and the MA Department of Conservation and Recreation to provide Statewide professional engineering services to state agencies and local municipalities.

Organization / Team

Our Team will be led by Anthony Puntin, PE, who is LPA certified. Tony will be supported by our Lead Highway Designer Chris Turgeon, PE and our Bridge Lead Christopher Jones, PE. They will have the support of our 160 professional engineers, planners, scientists, and other professional resources upon which to draw. Specialty subconsultants include:

GM2 – Survey and Environmental
Nobis Engineering – Geotechnical

Understanding

Assisting municipalities under the LPA program may involve providing a wide range and variety of services on highway and bridge projects. From conceptual, planning and outreach to gather public support, to preliminary and final design, through bidding and construction oversight, BETA understands the LPA Program and has the technical knowledge to successfully guide a municipality through the process. We are used to working on multiple concurrent assignments under On-Call Statewide contracts which requires staying focused and responsive.

We are confident the Department will find our extensive experience, expertise, depth of resources and specialty consultant team members more than qualified to be placed on the list of qualified LPA consultants. Please let me know if you have any questions or require any additional information.

BETA Group, Inc.

Mark R. Gershman, PE
Senior Vice President

BETA GROUP, INC.
40 Stark Street, Manchester, NH 03101
P: 603.321.3207 | W: www.BETA-Inc.com



2 Project Understanding and Approach

Company Overview

For over 35 years, BETA has provided integrated solutions that improve the communities where we live and work. Our multi-disciplinary approach offers the ability to take projects from ideas to implementation under one roof. We have over 160 engineers, landscape architects, planners, construction managers, and support personnel. Ranked as a “Top 500 Design Firm” by Engineering News Record, BETA has a strong track record of working successfully with state DOTs and our municipal clients. Our technical services include traditional roadway/highway design, bridge/structure design, and traffic engineering services. Additionally, our diverse experience with state agencies includes statewide sign inventories and upgrades, road safety audits, signal clearance retiming, horizontal curve studies, design peer reviews, and high crash locations studies. Many of these services are provided to state agencies through on-call contracts. Our clients include both municipalities (Salem, Laconia, Lebanon, and Claremont) and Departments of Transportation in New England (NH DOT, Maine DOT, RIDOT, MassDOT, and CTDOT). Our in-house complementary disciplines, such as landscape architecture, utility infrastructure design, and asset management allow BETA to undertake a large range of projects.

Roadway Design

A wide variety of projects may result from assignments received in association with the on-call qualification list. The project could range from planning level studies to resurfacing projects to detailed final design. This requires a diverse Project Team with depth and breadth of staff. Transportation is a core practice area for BETA, and we have the necessary resources to undertake this wide variety of projects. Included in the Appendix are a several projects that highlight our roadway design experience. These are a very small sample of our portfolio.

BETA’s experience, like the potential projects, covers a wide range of size and complexity. For several municipalities, we provide “book jobs”. These are relatively straightforward resurfacing and reclamation projects that include mostly plan view elements; profiles or cross sections are not needed. The more complex projects include a greater level of design. The complexity of the project will dictate the extent to which the consultant will undertake other activities, such as public hearing or informational meetings, alternatives investigation, pavement design, drainage analysis, stormwater treatment, development of right-of-way plan, etc. These assignments would entail development of Plans, Specifications, and Estimates (PS&E) to allow for bidding and construction.

Traffic Design and Analysis

There is typically a traffic component (design, analysis, etc.) associated with most Roadway Design projects. These may include a traffic study, evaluation and upgrade of signals, or upgrades of roadway signing. Standalone traffic projects may consist of the redesign of specific intersections to address design, safety, or capacity deficiencies. Tasks for these projects may include site investigations, traffic counts, speed studies, traffic modeling, and capacity analysis. BETA’s transportation group includes 10 professionals with a primary focus on traffic design and analysis. Our staff includes PEs, PTOEs, and IMSA certified signal inspectors. They are well versed in not only signal design, but also traffic modeling. They have significant experience with HCS, Synchro, SIDRA, SimTraffic, and VSSIM, as well as SignCAD and other traffic software applications. This expertise is demonstrated in the use of Adaptive Signal Technology in the development of a coordinated signal system in Merrimack, NH that includes four existing signals in the vicinity of F.E. Everett Turnpike. This “Peer-to-Peer” responsive traffic signal system has been found to operate more efficiently for closely spaced signalized intersections by allowing queues to be better managed between the intersections. Additionally, BETA is providing design service to the City of Claremont, NH for the interconnect of 10 signals on Washington Street. This will provide much needed optimization of this heavy retail and commercial corridor.

Programmatic and Safety Projects

There has been significant emphasis over the last several years placed upon improving roadway safety throughout the country. It is said that roadway safety begins with the “Three Es” – Education, Enforcement, and Engineering. There are several projects that may be assigned under this contract to address the last “E”. These could include guardrail replacements, railroad crossing upgrades, signing projects, or small intersection



improvements from the Highway Safety Improvement Program (HSIP) program. These types of projects may be relatively small in size due to their focus on a single location. However, the resulting impacts to safety improvements may be very beneficial as they address a known concern. BETA has a great deal of experience with projects of this nature. BETA has staff certified in the use of the Highway Safety Manual. BETA was one of the first firms to be awarded an on-call contract with MassDOT for Road Safety Audits (RSAs), when this program was first initiated many years ago. To date, we have performed over 65 RSAs. We have been selected by MassDOT to provide On-call services for design at several high crash locations.

Bridge Design

BETA has demonstrated success in providing bridge engineering services to DOTs under Statewide On-Call Agreements. Under our Statewide Master Services Agreement with MassDOT, we have designed nine bridge projects over the last five years ranging in size, complexity, and scope. The range of services anticipated closely align with those provided by our in-house resources and successfully demonstrated through our past performance on Statewide DOT On-Call Contracts. These services include: evaluation of existing structures, preliminary and final bridge design; design of roadway approaches including drainage, utilities and traffic systems; preparation of contract plans, documents, reports, and manuals; environmental permitting and documentation; hydraulic analysis, design of scour countermeasures and substructure protection; inspection and load ratings; and public outreach and hearings. BETA's extensive structural design experience includes box culverts, single and multi-span bridges, bridge replacement, superstructure replacements, and restoration projects. Many of our projects carry high volumes of traffic thereby requiring complex staging and traffic management. Accelerated bridge construction (ABC) techniques and use of precast concrete components have been used in many of our projects to reduce the construction duration and impacts to the public. These include the use of prefabricated bridge units, full-depth precast concrete deck panels, precast abutment and piers, precast approach slabs and highway guardrail transitions, use of secant pile walls and pile supported integral abutments.

In addition to projects that use traditional design-bid-build delivery method, BETA has provided design-build project delivery for MassDOT and RIDOT. As part of the design-build team for the MassDOT CSX Vertical Clearance Improvement Project, BETA was responsible for the complete design of three (3) bridges. Currently BETA is the lead designer providing bridge, roadway, and permitting services for the RIDOT design-build project to replace four bridges carrying I-95. This high-profile project requires maintaining the full capacity of the interstate during the week, with lane restrictions and traffic diversions only allowed over weekends. Heavy lift technology using self-propelled modular transporters (SPMTs), will be used to erect the fully constructed bridge superstructures over six weekends.

Environmental Evaluation and Permitting

Our project team includes GM2 for all environmental efforts. Services to be provided may include resource identification and impact assessment, National Environmental Policy Act (NEPA) documentation, and permitting services. Additionally, federally funded projects a Categorical Exclusion, and a Section 4(f) Determination for impacts to certain resources. Federal projects also require an Effect Determination under Section 106 of the National Historic Preservation Act; a process which is initiated with a Request for Project Review submitted to the New Hampshire Division of Historic Resources (NHDHR). State-funded projects would require an Environmental Study following NHDOT's format for non-federal projects documenting resources affected. At the beginning of the project, a summary of resources affected and of alternatives under consideration is presented at an NHDOT natural resource agency meeting. GM2 will also undertake all efforts needed for NHDES wetland or shoreland permitting.

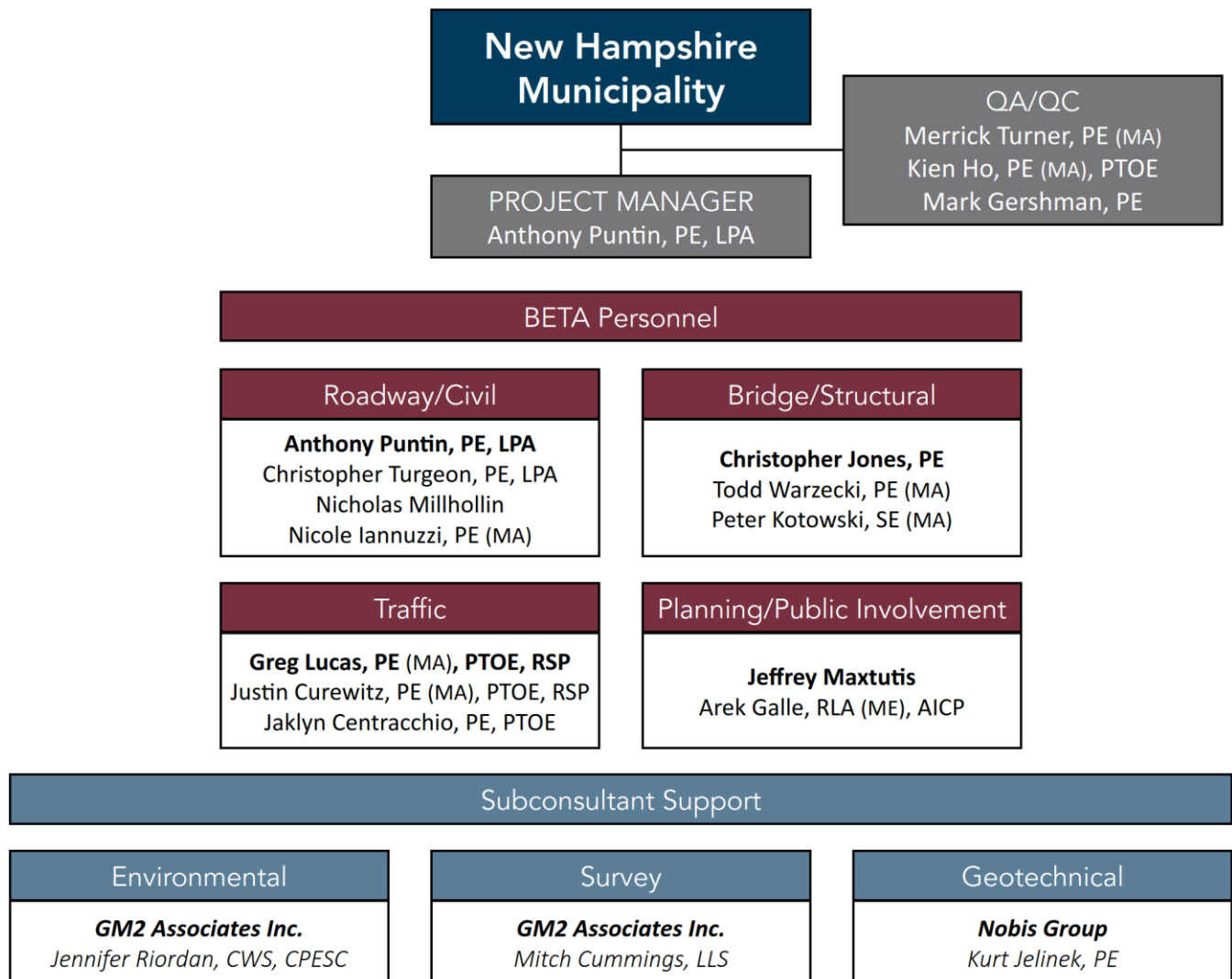
Geotechnical Investigation and Design

The project team includes Nobis to provide the required geotechnical investigations and design. It is possible that assignments may include structures (culverts, retaining walls, signal foundations, etc.) that have the need for geotechnical assessments. Test boring locations, depths, and the extent of evaluation needed will be based on the type of structure and NHDOT design requirements. The investigation will culminate in a geotechnical engineering report presenting the results of the subsurface investigations, laboratory testing, geotechnical engineering evaluations, and will include geotechnical recommendations for design and construction.

3 Organizational Chart

Organizational Chart

The Team put forth by BETA was developed to address the variety of potential projects that may arise from the LPA Program. The organizational chart below provides an overview of the structure of the Team and an accounting of the individuals that will be assigned per technical discipline. BETA will also utilize the services of subconsultants for specific services. GM2 will lead the Environmental Permitting/Documentation efforts. They will also provide Survey and ROW services. Geotechnical investigations will be undertaken by Nobis. The combination of in-house staff and specialized subconsultants provides a Team that can undertake any potential assignment. The depth and breadth of the Project Team is demonstrated by the individuals listed. Additional information for the Team members can be found in Section 4 and the Appendix of this document.



BETA appreciates the benefits of providing consistency throughout assigned projects. To that end, Tony Puntin, PE, LPA will be assigned as Project Manager for all assignment. His municipal and NHDOT experience will be a great asset to any project. A Project Team, tailored to an assignment, will be developed depending on the needed disciplines. The Project Team will designate the QA/QC, Technical Lead, and staff to address the project requirements.



4 Project Team

Introduction

The table provided below depicts the engineering services to be provided and the individuals who will provide those services for potential projects.

Highway and Bridge Design Engineering Services in Support of LPA Projects		Years of Experience	Years with Firm	Project Management	Highway Design	Bridge Design	Structural Engineer	Alternative Procurement Methods	Corridor Study Planning	Bridge Inspection	Bridge Load Rating	Hydrology	Environmental	Traffic Analysis	Geotechnical Engineer	Surveyor	Public Involvement
Key Personnel	Project Role																
BETA Group, Inc.																	
Anthony Puntin, PE, LPA	Project Manager/Roadway Lead	28	6	x	x			x	x								x
Merrick Turner, PE	QA/QC	35	14	x	x				x								x
Kien Ho, PE, PTOE	QA/QC	36	18	x					x					x			
Mark Gershman, PE	QA/QC	34	13	x		x	x	x		x	x						
Christopher Turgeon, PE, LPA	Roadway	10	10		x				x			x					
Nicholas Millhollin	Roadway	4	4		x				x					x			
Nicole Iannuzzi, PE	Civil	27	24									x					
Christopher Jones, PE	Bridge/Structural Lead	27	19			x	x			x	x						
Todd Warzecki, PE	Bridge/Structural	19	19			x	x			x	x						
Peter Kotowski, SE	Bridge/Structural	11	10			x	x			x	x						
Greg Lucas, PE, PTOE	Traffic Lead	24	22	x	x				x					x			
Justin Curewitz, PE, PTOE	Traffic	9	9		x				x					x			
Jaklyn Centracchio, PE	Traffic	18	13		x				x					x			
Jeffrey Maxtutis	Planning/Public Involvement Lead	31	2	x	x								x				x
Arek Galle, RLA, AICP	Planning/Public Involvement	29	8	x									x				x
Subconsultant Support																	
Jennifer Riordan, CWS, CPESC (GM2)	Environmental	16	2										x				x
Mitch Cummings, LLS (GMS)	Survey	11	9													x	
Kurt Jelinek, PE (Nobis)	Geotechnical	28	18												x		

Biographies of Key Personnel

Anthony Puntin, PE, LPA – Project Manager / Roadway Lead

Tony will serve as our Project Manager for assignments under this contract. He has 28 years of experience in the civil engineering industry with a focus on transportation design and planning, project delivery, and project management. His experience ranges from basic roadway rehabilitation and reconstruction of municipal roadways to complex, multi-contract interstate reconstruction projects. He has designed and managed several NHDOT projects and has held the role of Project Manager for on-call contracts with NHDOT, Manchester-Boston Regional Airport, and Lebanon, NH. He is currently the Project Manager for the Spencer Street and Washington Street projects included in the Appendix.

Christopher Turgeon, PE, LEED Green Associate, ENV SP, LPA – Roadway Design

Chris has 10 years of engineering experience and has been involved in a variety of engineering projects and a wide range of responsibilities including drainage calculations, system design, and use of related software (HydroCAD, HydraFlow); highway design software; preparation of project plans and reports; and development of right of way plans. Many of the projects Chris has undertaken were developed using the philosophy of “Complete Streets” in order to provide a comprehensive solution to a specific corridor or intersection project. He is the lead design engineer the Spencer Street and Washington Street projects.



Greg Lucas, PE (MA), PTOE, RSP – Traffic Lead

Greg has 24 years of experience in traffic and highway design and transportation planning. His responsibilities have included: design of traffic signal systems, highway design, roundabouts, signage and pavement marking design, guide sign design, traffic management plans, construction staging plans, drainage analyses and design, distribution of quantities, cost estimates, specifications, and traffic assessments involving signal design/analyses, signal warrants, and accident analysis. Greg has worked on improvement studies for bicycles and pedestrians including special bicycle signals. He is highly skilled in the design of traffic signals including coordinated systems, accessible pedestrian signals, arterial signal systems, emergency preemption and transit priority.

Justin Curewitz, PE (MA), PTOE, RSP – Traffic Design

Justin is involved in a variety of engineering projects gaining experience in a wide range of aspects including peer reviews, intersection design, pedestrian/bicycle accessibility studies and traffic analysis software such as Synchro, VISSIM, and SIDRA. Justin is also involved with projects that include such tasks as traffic and pedestrian studies; development of traffic management plan; preparation of project plans and reports; development of right of way plans; site visits and field inspections; compiling utility and roadway features using GIS software.

Christopher Jones, PE (MA) – Bridge/Structural Lead

Christopher has 27 years of experience specializing in structural engineering. Chris is versed in the inspection, design, and construction of a wide range of structure types including bridges, wastewater treatment structures, industrial buildings, and retaining walls. His bridge designs have ranged from simple culvert replacements to complex covered bridge rehabilitations.

Todd Warzecki, PE (MA) – Bridge/Structural Design

Todd has nearly 20 years of experience as a structural engineer. Todd's projects have included the inspection, design, and construction of bridges, parking garages, wastewater treatment facilities, buildings, and retaining walls for various municipalities and state agencies. He is responsible for a wide range of tasks that include reinforced concrete design, steel design, timber design, preparation of technical reports, specifications, and construction cost estimates.

Jeffrey Maxtutis – Planning/Public Involvement Lead

Jeff has over 30 years of experience focused on producing and overseeing traffic and transportation studies ranging from small developments to large-scale projects including traffic, highway, transit, and pedestrian and bicycle and multi-modal projects. Jeff's technical expertise includes highway and interchange operations, electronic tolling, corridor studies, neighborhood traffic calming, special event operations, traffic modeling, transit planning and operations, bus rapid transit priority signalization, municipal master plans, complete streets, safe routes to school, and state and federal environmental reports including MEPA/NEPA.

Subconsultant Support

GM2 – Environmental and Survey

GM2 will provide environmental services that include initial investigations and natural resource surveys, environmental impact assessments, applications for obtaining or amending environmental permits, mitigation strategies for complying with the subjects of such permits, Section 4(f) and Section 6(f) evaluations, and NEPA documentation. GM2 survey crews will provide boundary, topographic, construction layout, and route surveys as needed. The crews employ the latest survey technology and equipment in order ensure the accuracy and efficiency of their work.

Nobis – Geotechnical

Nobis will provide all necessary geotechnical investigation and design. This may include pavement design for roadway projects or analysis associated with bridge construction. Their experience also includes geotechnical analysis and design for building foundations, transportation infrastructure improvements, and utility layouts.



5 References

References

There is no better benchmark on the quality of services provided by our staff than feedback and testimonials from our clients. BETA is pleased to provide the following list of references for your consultation.

Brian A. Vincent, PE

City Engineer, DPW
City of Lebanon
193 Dartmouth College Hwy
Lebanon, NH 03766
603.448.3112 x1515

Krista Larson

Assist. Public Works Director
City of Laconia
27 Bisson Avenue
Laconia, NH 03246
603.528.6379 x306

James Dalton, PE

Bridge Project Manager
MassDOT Highway Division
Ten Park Plaza
Boston, MA 02116
857.368.9313

6 Appendix: Resumes

Anthony Puntin, PE, LPA Project Manager / Roadway Lead



Mr. Puntin has 28 years of experience in the civil engineering industry with a focus on transportation related design projects and project management. He has been Project Manager for numerous design projects where his responsibilities entailed: contract preparation; technical supervision; QA/QC; budget, cost, and schedule control; client relations and satisfaction; and public hearings. His experience also includes projects utilizing alternative delivery methods, as he served as project manager for three design-build roadway and bridge projects. As an Associate at BETA, Mr. Puntin is responsible for the management and oversight of the technical and operational activities in BETA's Northern New England office.

- Washington Street Signal System – Claremont, NH
- Pedestrian Crossing Improvements (Maine DOT) – Brunswick, ME
- Route 125 Upgrade/Reconstruction (NHDOT) – Epping, NH
- I-95 NB & SB Design/Build Bridge Superstructure Replacement Project over Toll Gate Road & Centerville Road (RIDOT) – Warwick, RI
- Tuscan Village Development – Salem, NH
- Union Avenue Improvements – Laconia, NH
- I-93 Salem-Manchester Corridor Widening – Salem/Manchester, NH
- Piscataquis River Bridge Design/Build Replacement Project – Howland, ME
- Route 125/136 Design-Build – Freeport, ME
- US Route 3 over F.E. Everett Turnpike, NHDOT Design/Build Project – Bedford, NH
- Shore Drive Reconstruction – Salem, NH
- Washington Street Bridge Replacement – Dover, NH
- Interstate 93, Exit 13 – Concord, NH



Christopher Turgeon, PE, LEED Green Associate, ENV SP, LPA Roadway Design

As a Senior Project Engineer with over ten years, Mr. Turgeon is involved in a variety of engineering projects where he has experience over a wide range of responsibilities including: Drainage calculations, system design, and related software (HydroCAD and HydraFlow); Highway design software (AutoCAD, Civil 3D, and Land Development); Geographic Information System software (ArcMap); Preparation of project plans and reports; Development of Right of Way (ROW) plans; Development of traffic management plans; Construction observations; Preparation of assorted environmental permitting reports; Traffic, pedestrian, and parking studies; and Roadway/highway design.

- Union Avenue – Laconia, NH
- Pedestrian Crossing Improvements – Maine Department of Transportation
- Commonwealth Avenue Roadway Reconstruction – Boston, MA
- Kansas Street – Natick, MA
- Barnstable Traffic Signal Inventory – Barnstable, MA
- Route 27 – Natick, MA
- Lynnfield Street – Lynn, MA
- Pavement Management – Various Towns
- Sea Street Corridor and Sea Street/Quincy Shore Drive Intersection – Quincy, MA
- Peer Review Services – Statewide, MA (MassDOT)
- Washington Street – Taunton, MA

Greg Lucas, PE (MA), PTOE, RSP
Traffic Lead

Mr. Lucas has 24 years of experience in the traffic design, highway design, and transportation planning fields. His responsibilities have included: design of traffic signal systems including closed loop signal systems, highway design, safety analysis, roundabouts, signage and pavement marking design, guide sign design, traffic management plans, construction staging plans, cost estimates, specifications, in addition to providing traffic assessments involving signal design/analyses, signal warrants, and crash analysis. Mr. Lucas is very familiar with MassDOT Highway Division standards and policies. Mr. Lucas has presented at public hearings for MassDOT TIP projects statewide and has performed many public presentations in other communities. He is familiar with HCS, Synchro, SIDRA and VISSIM traffic analysis software.



- NH Route 125 – Epping, NH
- Traffic Signal System Improvements – Merrimack, NH
- Traffic Signal Improvements – Laconia, NH
- Blue Hill Avenue and Warren Street Traffic Signal Improvements – Boston, MA
- On-Call Statewide Road Safety Audits, MassDOT Highway Division – Boston, MA
- On-Call Statewide High Crash Locations, MassDOT Highway Division – Boston, MA
- Peer Review Services for Planning Board & Zoning Board of Appeals – Various Communities
- Complete Streets Program Prioritization Plan – Lynn, Melrose, Easton, & Billerica, MA
- Broadway (Route 107) Traffic Signal System Upgrade – Revere, MA
- Route 126/Route 135 Downtown Grade Separation Traffic Model – Framingham, MA
- Route 18 at Two Locations Intersection Improvements – Whitman, MA
- Cochituate Rail Trail – Natick, MA
- Rail Trail Extension – Norton and Mansfield, MA
- Five Corners Sewer Phase II – Traffic Management Plan – Easton, MA



Justin Curewitz, PE (MA), PTOE, RSP
Traffic Design

Mr. Curewitz is a Senior Project Engineer involved in a variety of engineering projects where he is gaining experience over a range of responsibilities including: Geographic Information System software (ArcMap); Preparation of project plans and reports; Complete Street Designs/Healthy Transportation Roadways; Development of Right of Way Plans; Site visits and field inspections; Construction Services/Coordination with contractor; Traffic Signal Design and Coordination; and Development of traffic management plans.

- Blue Hill Avenue and Warren Street Traffic Signal Improvements – Boston, MA
- Depot Street (Route 123) Corridor Improvements – Easton, MA
- Blue Hills Parkway Intersection Improvements – Milton, MA
- Washington Street (Route 138) and Union Street Improvements – Easton, MA
- Allen Road Roadway Reconstruction MassDOT – Billerica, MA
- Road Safety Audit Program – MassDOT
- Malden On-Call Peer Review – Malden, MA
- Town-wide Traffic Signal Inventory – Barnstable, MA
- Route 126/135 Intersection Improvements MassDOT – Framingham, MA
- Middlesex Fells TSI Traffic Study MA DCR – Stoneham, MA
- East Street Corridor Improvements – Westwood, MA
- Reconstruction of Route 126 (Concord Street) MassDOT – Framingham, MA
- Lebanon Street Traffic and Safety Improvements MassDOT – Melrose, MA

Christopher Jones, PE
Bridge/Structural Lead

Mr. Jones has 27 years of experience in the civil engineering field, specializing in structural engineering. Chris has served as both Project Manager and Project Engineer for the inspection, design, and construction of a wide range of structure types including bridges, pumping stations, wastewater treatment structures, industrial buildings, and retaining walls. His projects have included entirely new structures, major rehabilitations, and preservations.



- Atlantic Avenue Bridge over Little Harbor Inlet – Cohasset, MA (MassDOT)
- Central Ave / Elliot Street Bridge over Charles River – Needham & Newton, MA
- Chestnut Street over Ten Mile River – North Attleborough, MA
- Route 146 Northbound over Mumford River – Uxbridge, MA (MassDOT)
- Route 37 Bridge Rehabilitations Group 51A – Warwick & Cranston, RI (RIDOT)
- Kendrick Street / Nahanton Street Bridge over Charles River – Needham & Newton, MA
- Providence Highway Bridge over Mother Brook – Dedham, MA (MassDOT)
- Mirimichi Street over Lake Mirimichi – Plainville, MA
- Route 126 / Route 135 Grade Separation – Framingham, MA
- Comprehensive Bridge Rehabilitation Program Group 2 – West Greenwich & Exeter, RI
- Victory Highway (Route 102) Bridge over Interstate 95 – West Greenwich, RI (RIDOT)
- Interstate 95 Bridge over Tefft Hill Trail – Exeter, RI (RIDOT)
- Interstate 95 Bridge over Ten Rod Road – Exeter, RI (RIDOT)
- Interstate 95 Bridge over Weaver Hill Road – West Greenwich, RI (RIDOT)
- Interstate 95 Bridge over Robin Hollow Road – West Greenwich, RI (RIDOT)
- Central Street Bridge over Sudbury River – Framingham, MA (MassDOT)



Todd Warzecki, PE (MA)
Bridge/Structural Design

Mr. Warzecki has 19 years of experience at BETA. He has worked on a variety of projects where he has directed or assisted in the design of numerous structures. Todd's projects have included the inspection, design, and construction of structure types including bridges, parking garages, wastewater treatment facilities, buildings, and retaining walls. As a Project Manager for BETA, Todd has been involved in engineering projects where he has been responsible for a wide range of tasks including: Seismic, Fatigue, and Stability Analysis; Reinforced Concrete, Steel, and Timber Design; Structural Inspection and Evaluation; Preparation of Technical Reports and Documents; Geographic Information Systems; and Roadway Condition Evaluation.

- Blackstone Street over Blackstone River – Sutton, MA (MassDOT)
- Washington Street over Mill River – Taunton, MA (MassDOT)
- On-Call Peer Review – MassDOT
- CSX Design/Build Bridge Bundle #1 – Richmond/Hinsdale/Chester/W. Springfield, MA (MassDOT)
- Hamilton Road over Route 2 – Leominster, MA (MassDOT)
- Route 2A over I-49 – Littleton, MA (MassDOT)
- Route 122 over Muddy River Brook – Oakham, MA (MassDOT)
- Hospital Road Bridge over Nashua River – Harvard/Shirley, MA (MassDOT)
- Box Mill Road over Elizabeth Brook – Stow, MA (MassDOT)
- Sleepy Hollow Road over CSX Railroad – Richmond, MA (MassDOT)
- Central Street Bridge over Queset Brook – Easton, MA (MassDOT)
- Old Pleasant St. Bridge over Housatonic River – Lee, MA (MassDOT)
- Route 112 Bridge over Westfield River and CSX Railroad – Huntington, MA (MassDOT)



Jeffrey Maxtutis
Planning/Public Involvement Lead

Mr. Maxtutis has more than 31 years of experience as a project manager and senior transportation planner responsible for transportation projects in the northeast United States and across the nation. His responsibilities have focused on producing and overseeing traffic and transportation studies ranging from small developments to large-scale projects including traffic, highway, transit, and pedestrian and bicycle and multi-modal projects.



Jeff's technical expertise includes highway and interchange operations, electronic tolling, corridor studies, neighborhood traffic calming, special event operations, traffic modeling, transit planning and operations, bus rapid transit priority signalization, municipal master plans, complete streets, safe routes to school, and state and federal environmental reports including MEPA/NEPA.

- Master Plan – Derry, NH
- Commonwealth Avenue Bicycle Lane Design – Newton, MA
- 114 Whitwell Street Development Project Review – Quincy, MA
- Surfside Crossing Development 40B Housing Project – Nantucket, MA
- Traffic Review of Redevelopment Projects – Revere and Saugus, MA

Project Experience Prior to Joining BETA:

- MassDOT, Office of Transportation Planning, Statewide Safe Routes to School Program – Infrastructure Application and Planning Process
- Boston University Master Planning – Boston, MA
- Liberty Mutual Traffic Impact and Access Study – Weston, MA
- MBTA, Focus40 – Boston, MA
- MassDOT, Office of Transportation Planning, Silver Line Gateway Road Safety Audits – Chelsea, MA
- Boston Bridges over Mass Turnpike – Boston Back Bay, MA
- Road Safety Audits – Boston, Everett, and Medford, MA
- MassDOT, I-90 All Electronic Tolling System (AETS) – Statewide MA



Arek Galle, RLA (ME), AICP
Planning/Public Involvement

Mr. Galle, a licensed Landscape Architect and Certified Planner, is an Associate at BETA. With 29 years of experience, Arek has worked with many communities across New England to identify and interpret their project needs into transformative work that builds lasting value and emphasizes 'Quality of Place'.

Arek's body of work reveals his ability to bring great detail and technical expertise to unify hardscape and landscape elements within a project. His ability to synthesize various project program elements into cohesive, engaging and constructible plans has resulted in the realization of many successful and highly utilized projects.

- Maine Street Station Redevelopment Plan – Brunswick, ME
- Broadway Streetscape Improvements – Newport, RI
- Water Street Promenade Phase I Improvements – Plymouth, MA
- Phase I and II Complete Street Inventory and Master Planning – Clinton, MA
- Water Street/Ferry Street Improvements – Fall River, MA
- Neighborhood Complete Street/Streetscape Enhancement Projects – Fall River, MA
- Reconstruction of the Portuguese Discovery Monument – Newport, RI
- Grave Marker Re-establishment for True Line and Grades – Exeter, RI
- The Foundry, The Foundry Corporation – Providence, RI

Jennifer Riordan, CWS, CPESC (GM2)
Environmental

Ms. Riordan has 16 years of environmental consulting experience within the transportation industry. Her resume is comprised of diverse transportation projects ranging from on-call environmental services to the complex reconstruction of interstate highways and airport improvements. She offers extensive expertise in preparing federal, state, and local environmental permit applications and has contributed to dozens of NEPA documents. Along with her technical skills, Ms. Riordan is an effective communicator, accountable team partner, and impactful project leader.



- NH Route 125 Improvements, Epping, NH
- NHDOT Statewide On-Call Environmental Services Agreement, NH
- NH Route 123A over Bowers Brook Bridge Replacement, Acworth, NH
- Mill Street over Ammonoosuc Rail Trail Bridge Replacement, Haverhill, NH
- -93 Improvements Project, Salem to Manchester, NH
- US Route 4 over the Blackwater River Bridge Replacement, Andover, NH
- NH Route 152 over the North River Bridge Replacement, Nottingham, NH
- New Hampshire Capitol Corridor Rail and Transit Study, Nashua to Concord, NH



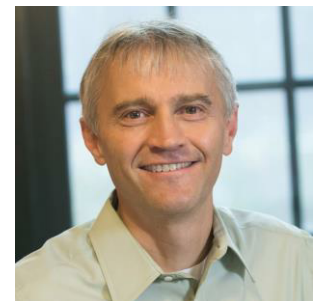
Mitch Cummings, LLS (GM2)
Survey

Mr. Cummings has over 11 years of experience including a multi-faceted skill set of survey, engineering, and construction. Licensed in New Hampshire, Maine, and Vermont, his main responsibilities have revolved around land surveying, always with an eye to the engineering and construction aspect of each project. His experience also includes extensive project management, land record research, plan preparation, and drafting within various CADD platforms.

- US Route 4 Right of Way, Durham, NH
- Route 123A Right of Way, Acworth, NH
- NH Route 28 & 171 Right of Way Survey, Ossipee, NH
- US Route 1 Right of Way, North Hampton, NH
- NH Route 4 over the Blackwater River Engineering Survey, Andover, NH
- NH Route 25A Engineering Survey, Orford & Wentworth, NH
- NH Route 108 Right-of-Way & Engineering Survey, Dover, Somersworth & Rochester, NH
- NH Route 125 Right of Way, Plaistow & Kingston, NH

Kurt Jelinek, PE (Nobis)
Geotechnical

Mr. Jelinek has over 25 years of experience in geotechnical, civil, and environmental engineering throughout New England. His technical expertise includes geotechnical subsurface explorations; engineering analysis for the design of bridge and facility foundations, utilities, roadways, railroads, airports, recreation trails, landfill closures and dams; and construction management of environmental remediation systems.



- NHDOT, Manchester-Boston Regional Airport Access Road, Manchester, NH
- NHDOT, ATMS, I-93 Salem to Manchester, I-95/Spaulding Turnpike Corridors, NH
- MaineDOT North Parish Bridge, Turner, ME
- MaineDOT Martin's Point Bridge, Falmouth-Portland, ME
- MassDOT Shared-Use Bridge over MBTA/CSX Railroad, Franklin, MA

6 Appendix: Applicable Work Experience

Union Avenue Improvements – Laconia, New Hampshire



The Union Avenue corridor in Laconia is a major part of the City's business district. Over the past several years, the City has undertaken the reconstruction of various portions of the corridor in an effort to preserve the serviceability of the roadway. The three-lane segment between Lakeport Square and Stark Street has fallen into a state of disrepair. The roadway is experiencing fatigue and cracking due to poor subbase material and inadequate drainage. Additionally, there are substandard pedestrian facilities

and a collapsing retaining wall along this portion of the corridor. To improve safety and longevity of the roadway, BETA, in conjunction with Loureiro Engineering, designed the reconstruction of Union Avenue. The project includes the rehabilitation of the pavement (reclaim and full depth), upgrade of the sewer, upgrade of pedestrian facilities, installation of new signing, and repair of the water and gas utilities.

The Lakeport Square intersection will be upgraded to improve traffic flow and increase safety. These improvements include reconstruction of the pedestrian facilities for conformance with ADA standards, modification to the traffic signal parameters, installation of preemption with the nearby railroad crossing, and revision to lane geometry. The Stark Street intersection at the project's northerly limits has large radii that encourages faster travel speeds from Union Avenue on to Stark Street. Improvements have been developed to alleviate vehicle safety deficiencies by reconfiguring the intersection and improving sight lines.

Washington Street Signal System Optimization – Claremont, New Hampshire

Washington Street is a prime example of a corridor that is experiencing "typical" traffic problems that accompany retail and commercial development demands placed on a roadway network. Recognizing the need to address these concerns, the City has applied for and has been awarded a Congestion Mitigation Air Quality (CMAQ) Grant from the New Hampshire Department of Transportation. These funds will be administered through their Local Public Agency (LPA) Program. The project's intent is to maintain the current lane use configuration and upgrade/retrofit the existing signals and signal network to provide efficient and coordinated progression of vehicles.



The City's signal optimization of the Washington Street corridor will consist of optimizing ten (10) intersection signal systems coupled with the implementation of remote access availability from the fire station which will serve as the central operational command center. The command center will provide remote traffic operational management and monitoring with maintenance alert feature. Improvements will entail upgrading/retrofitting existing traffic signal control equipment, communication, GPS emergency vehicle pre-emption and traffic software at the ten existing signalized intersections located along Washington Street. The implementation could include traffic signal controller upgrades, data communication interfaces, remote central operation capability, advanced traffic management system software, system level vehicle detection, and installation of a full and complete adaptive traffic control system. Video feed of live traffic conditions will be included as part of the remote traffic monitoring center at the fire station. For communication interface purposes, the project could utilize the existing copper cable interconnect for some of the traffic signal locations. Depending on the final selection on the type of signal software system, the copper cable interconnect could be reused to support Ethernet data communication instead of the existing serial data connection. Other communication technology will be evaluated as part of this project.

Spencer Street Improvements – Lebanon, New Hampshire



The Spencer Street corridor in Lebanon, NH has traditionally served industrial and single-family homes directly abutting or accessed by the corridor. In recent years, the roadway has experienced significant growth with the construction of several commercial and multi-unit residential developments. Additionally, the City has accepted a proposal from a private entity for the redevelopment of the former DPW site on Spencer Street. These projects, coupled with the potential future development, have necessitated a significant upgrade to the Spencer Street corridor.

BETA was contracted with the City to provide services associated with the Preliminary Design of the improvements. The major focus of this phase of the design is the development and evaluation of design alternatives to accommodate the multitude of users of the roadway. This requires that the design utilize a “Complete Streets” approach when developing the improvements options. BETA will prepare three design option (complex, intermediate, and simple) for review by the City. Each option will include varying levels of specific various design elements including: sidewalk material type, location of sidewalk, pavement/subbase treatment, and streetscape elements. The project will also include the reconfiguration of the Taylor/Spencer Street intersection. Currently, there is a stop condition westbound traffic on Spencer Street. As this is the predominant movement in the intersection, the proposed design will re-align Taylor Street to form a “T” with Spencer Street.

Upon completion of the alternatives investigation, BETA will prepare the Final Design Plan, specifications, and estimate, acquire all necessary permits, and advertisement/award for a Spring 2021 construction.

Traffic Signal System Improvements – Merrimack, New Hampshire

As part of a land development project in Merrimack, NH, BETA prepared off-site traffic signal improvements to reduce long delays and vehicular queueing between intersections along the Amherst Road and Continental Boulevard/Greeley Street corridors. During peak time periods, eastbound and westbound vehicles could not progress through the closely-spaced intersections due to the presence of queued vehicles at downstream traffic signals. Additionally, the Executive Park Drive and Amherst Street signalized intersection experienced delays due to the adjacent backups on Continental Boulevard. BETA was contracted to develop solutions that would help alleviate vehicular queueing between intersections and thereby improve vehicular progression along the corridors.



BETA conducted an extensive field investigation and gathered the as-built plans to analyze the existing conditions. Significant communication and coordination with the Town and NHDOT was required throughout the project development process. The traffic signal systems designed by BETA will provide continuous traffic flow and thereby reduce travel times, delays, and fuel consumption that can improve air quality. A Coordinated Traffic Signal System will be incorporated that includes the Continental Boulevard, Greeley Street, Amherst Road, and Camp Sargent Road intersection; the Greeley Street and F.E. Everett Turnpike northbound ramps; and the Greeley Street and D.W. Highway intersection. This type of system enables multiple intersections to be synchronized to enhance the operation of one or more directional movements in a network. In addition, a Peer-to-Peer Responsive Traffic Signal System will be installed to include the Amherst Road intersections with Executive Park Drive and with Continental Boulevard, Greeley Street, and Camp Sargent Road intersection. This Peer-to-Peer Responsive Signal System will be the first of its kind in New Hampshire and has been found to operate more efficiently for closely spaced signalized intersections by allowing queues to be better managed between the intersections.

Traffic Control Operations Center & Adaptive Traffic Signal Response System – Wellesley, Massachusetts



The Project consisted of designing a traffic control operational center by integrating the multiple closed loop systems into the existing Wellesley Police command center. The traffic signal system consisted of a total of 15 traffic signal locations. The remote traffic control operational center had the ability to provide real time traffic information into the police station and remote locations including Town Hall and BETA's office.

This project included the upgrade of all the local traffic signal equipment with new controllers, MARC NX traffic software, detection system, communication equipment (video encoders), Ethernet, fiber optic patch panels, distribution amplifiers and fiber optic (48 Strand Single Mode) installation. The upgraded traffic signal system provided a traffic response system managing daily traffic operation and surveillance. The video detections systems were used for three consolidated functions; namely, vehicle local and system detections, police surveillance and live traffic monitoring. The improvements also consisted of upgrading the existing closed loop system with the latest traffic signal control equipped with Intelligent Transportation System (ITS) application. This provided an adaptive traffic signal timing control operation based upon real

time, on-demand traffic conditions.

Installation of fiber optics and Ethernet communications provided the bandwidth necessary for processing traffic data and video imaging to the remote traffic control center at the Police Station and other remote locations. The 15 traffic signal locations were designed as a three closed loop sub-system to prevent any future system wide failures.

East Broadway Bridge over Millvale River – Haverhill, Massachusetts

BETA was retained by the City of Haverhill for the replacement of the East Broadway Bridge over the Millvale River. The existing bridge was comprised of a reinforced concrete slab, with embedded track rails, spanning 18 feet and supported by field stone abutments.

The existing bridge had experienced severe deterioration of its concrete slab as well as displacement and undermining of the abutment stones. The bridge is subject to flooding from the Merrimack River and located within a habitat for a rare species.



BETA performed the preliminary and final design of the replacement bridge to maintain the existing hydraulic opening while not impacting the flood storage capacity of the river and site. Approximately 150 feet of the roadway was reconstructed along with the relocation of the water line out from within the bridge opening. BETA filed a Notice of Intent with the Haverhill Conservation Commission to permit the removal and reconstruction of the bridge within the waterway.

The project was advertised for construction in April 2016, and construction completed in 2017. The final design was submitted to MassDOT for a structural adequacy review under M.G.L. Chapter 85.

Mirimichi Street Bridge Replacement – Plainville, Massachusetts



Mirimichi Street in Plainville crosses Lake Mirimichi on a narrow earthen causeway. An 11-foot-span bridge in the center of the causeway allows water to equalize in the two halves of the lake. The original bridge had become structurally deficient, resulting in the Town placing steel roadway plates over the superstructure to keep the bridge in service.

BETA assisted the town with preparing a grant application for MassDOT's Small Bridge Program, which resulted in an award of \$500,000 for the design and construction of a replacement structure. BETA performed a hydraulic study of the late confirming the adequacy of the existing bridge's hydraulic opening. Because stream crossing guidelines for opening size weren't applicable for this application, the decision was made to maintain the original opening with a three-sided precast concrete bridge with cast-in-place concrete footings.

A subsurface investigation revealed underlying layers of peat and silt, which would require deep foundations. Because overhead utilities could not be relocated due to the narrow causeway and could not be de-energized due to the isolated section of town on the east side of the lake, driven piles were not applicable. The decision was made use concrete-filled drilled micropiles, which could be installed using low-overhead equipment beneath the overhead utilities.

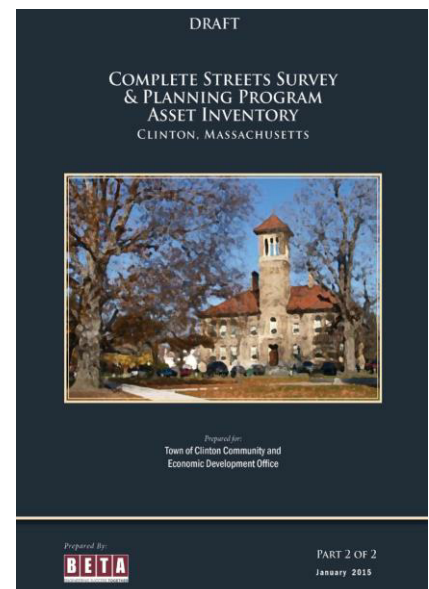
The location in the middle of the lake required the contractor to install a cofferdam and bypass piping in order to allow for the construction to be completed in dry conditions. BETA prepared permitting applications including a Notice of Intent, DEP Chapter 91 Waterways License, and ACOE Preconstruction Notification.

Complete Streets Survey and Planning Program – Clinton, Massachusetts

The Town of Clinton, Massachusetts wanted to better understand the nature of its infrastructure and explore opportunities for developing a more cohesive network of streets and sidewalks, in the form of promoting Complete Streets. BETA inventoried 25 miles of the Town's streets, focusing primarily on those emanating from the Historic Downtown. Streets were inventoried, surface condition assessed, and rated to develop a comprehensive overview of overall conditions.

BETA developed a series of matrices organized to rank streets on jointly developed criteria for walkability, civic connectivity, bicycle opportunity, as well as access to recreational areas, retail areas, grocery stores and healthcare facilities. Streets accumulated a composite score, which afforded the Town a basis to develop a list of "Complete Street Corridors" and focus priorities.

A key aspect was to look more deeply at the core objectives of Complete Streets, one of which is the creation of transportation equity, or allowing for choice for various modes of transportation, particularly developing transportation equity for underserved Low to Moderate Income populations in Clinton. The final products developed included Street and Conditions mapping for the project area, Asset Inventory and Analysis reports based on the GIS field work conducted by BETA, and a Narrative Summary with the matrices developed during the project, with roadway rankings and composite scores. The Narrative Report prepared included tiered recommendations and highlighted various projects for enhanced connectivity and the development of a Complete Streets network in Clinton.



NH Route 123A over Bowers Brook – Acworth, New Hampshire (NHDOT)



GM2 completed the Part A & B design, NEPA documentation, and permitting for this bridge replacement project. Environmental tasks included delineating wetlands within the project area, reviewing the site for invasive plant species, and conducting a stream crossing assessment. GM2 prepared the NEPA Categorical Exclusion document, attended the public hearing and public informational meeting, and coordinated with historic and archaeological resource consultants. During Part B, GM2 prepared the New Hampshire Department of Environmental Services (NHDES) Wetlands and Shoreland Permit applications.

NH Route 125 Improvements – Epping, New Hampshire (NHDOT)

GM2 is currently providing environmental support on this project, which involves improvements along a 3-mile section of NH Route 125, from Brickyard Plaza to NH Route 87. GM2 is tasked with preparing the NEPA documentation/Section 4(f) Evaluation and wetland and shoreland permit applications. As part of these tasks, GM2 is conducting wetland delineations and functional assessments, invasive species surveys, endangered species surveys, and stream crossing assessments for the project corridor. GM2 is also responsible for coordinating with the other environmental subconsultants who are performing the archaeological and historic resource reviews, air and noise studies, and mussel survey. The project also requires coordination under Section 7 of the Wild and Scenic Rivers Act since the project crosses the Lamprey River, a federally-designated Wild and Scenic River.



ATMS Design-Build Projects – Rochester/Seabrook and Salem/Manchester, New Hampshire (NHDOT)



Nobis was part of two Design-Build teams working on two Advanced Traffic Management Systems (ATMS) projects. One ATMS project was along the I-95/Spaulding Turnpike corridor between Rochester and Seabrook, New Hampshire, and the other project was along the I-93 corridor between Salem and Manchester, New Hampshire. The projects involved the design and installation of an advanced traffic management system including Close Circuit Television Cameras (CCTV), Dynamic Message Signs (DMS), Transmission Hub Tower, and Variable Speed Limit Signs.

As part of both these projects, Nobis reviewed existing subsurface information, planned and performed supplemental geotechnical subsurface exploration programs, and provided foundation recommendations for shallow as well as deep foundations. Nobis coordinated and observed the drilling activities, implemented traffic control plans to protect public and worker safety while drilling the borings along the interstate highway, and coordinated with local towns, NHDOT districts, and utility companies. All drilling work was performed along state highways or interstate highways and as such was performed with the protection of New Hampshire State Troopers for traffic safety reasons. Detailed test boring logs with engineering soil classifications were prepared by Nobis.

Soil samples as well as rock cores were collected during field explorations and submitted to a geotechnical laboratory for testing. Nobis prepared a geotechnical engineering report for each of the two projects providing foundation recommendations for the new structures. Nobis also provided construction observation services for the foundations.